

## PATTERN-DEPENDENT EQUALIZATION AND DETECTION

## ABSTRACT

A system for pattern dependent equalization has an equalizer bank and a detector. The equalizer bank has a plurality of equalizers, which are each tuned to a selected data pattern. The detector may be a standard sequence detector or a modified Viterbi detector, which calculates the branch metric using a pattern dependent equalized output and a pattern-dependent target. A method of decoding data uses a pattern dependent equalizer bank. The pattern dependent equalizer bank processes a segment of a bit sequence to produce an equalized pattern-dependent output for each equalizer in parallel. The detector then detects the bit sequence using the branch metric calculation to select the smallest accumulated path metric.